



JAX-BT-311

Seat No. _____

M. Sc. (Biotech.) (Sem. III) (CBCS) Examination

December – 2019

BT - 311 : Fermentation Technology

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

- 1 Answer the following : (Any seven out of Ten, each of 2 marks) 14
1. Define secondary metabolites.
 2. How fermentation differs from respiration ?
 3. What are baffles and what is its function ?
 4. What is external feedback ?
 5. What is flocculation ?
 6. What is precipitation reaction ?
 7. Define fermentation.
 8. What is single cell protein ?
 9. Enlist food processing methods ?
 10. Define designer food.
- 2 Answer the following : (Any two out of Three, each of 07 marks) 14
- a. Discuss different types of C sources used for media preparation.
 - b. Write a note on screening of industrially useful microorganisms
 - c. What is foam sensing ? How it is controlled ?
- 3 Answer the following : (each of 07 marks) 14
- a. Write an essay on aseptic operation and containment.
 - b. Enlist and explain various strategies to scale up the bioprocess.

OR

- 3** Answer the following : (each of 7 marks) **14**
- a. Discuss in detail, an ideal fermenter
 - b. Discuss various types of aerators and agitators.
- 4** Answer the following : (each of 7 marks) **14**
- a. How microbial cells and other solid matters can be separated ?
 - b. Explain centrifugation techniques in detail.
- 5** Answer the following : (Any two out of four, each of 07 marks) **14**
- a. Explain fermentative production of vitamin B₁₂ fermentation.
 - b. Explain in detail production and purification of penicillin antibiotic.
 - c. Write a note on food spoilage.
 - d. Explain in detail food packaging processes.
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